

APPLICANT(S): KOREM, Aharon

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In the Claims:

Please cancel claims 1-30 without prejudice or disclaimer.

Attached please find amended claims 31 through 56

31. (Currently presented) A vending machine for making and supplying books on request and in real time comprising:

- a. an operating panel including a first electronic display for displaying the identification information of the book titles available and a second electronic display serving as a user's interface and enabling a user to select one of said available book titles for printing;
- b. a payment device to be used by the user for paying for the selected book title;
- c. a black and white text and image duplex print engine for printing the text and image information of said selected book title on a plurality of pages;
- d. a color print engine for printing the cover information of said selected book title on front and back covers material;
- e. a collator to collate the printed pages and the front and back covers of the book selected by the user;
- f. a grinding device for roughening the book spine on which a backing tape or glue will be placed;
- g. a binder for binding the printed pages and covers collated by said collator;
- h. a display for visually displaying a hard copy of the book title cover;
- i. a data storage device for storing a plurality of said book titles including title language, the text and image information, the cover information, and other identification data, and
- j. a controller for extracting from said storage device a book title and language selected by the user, and for controlling said text and images to be printed, said cover information to be printed, said collator, and said binder, thereby to print and bind the selected book for immediate delivery to said user.

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32. (Currently presented) The apparatus according to claim 31, wherein said payment device includes a credit card slot for insertion of a credit card by the user.
33. (Currently presented) The apparatus according to claim 31, wherein said operating panel further includes a driver slot for the insertion of an external data carrier containing a book title information, by the user to be printed and bound in place of a book title stored in said data storage device.
34. (Currently presented) The apparatus according to claims 31, wherein said black and white text and image print engine further comprises:
 - a. a holder for at least one roll of a paper web;
 - b. a feeder for feeding said paper web to the black and white text and image print engine;
 - c. a plurality of ink jet print heads disposed along both sides of said paper web for simultaneously printing on both sides of said paper web, and
 - d. a cutter for cutting said paper web into sheets of a page size as controlled by said controller.
35. (Currently presented) The apparatus according to any one of claims 31 and 34, wherein said black and white text and image print engine includes a plurality of holders for holding a plurality of rolls of paper web, each holder including a sensor for sensing the quantity of paper web in the respective holder, and for actuating said controller to automatically switch-over to another holder when the paper web in the respective holder approaches depletion.
36. (Currently presented) The apparatus according to claims 31 and 34, wherein said black and white text and image print engine further includes a holder guide for each roll holder for guiding the paper web therefrom;
 - a. an exit guide;

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b. and an indexible guide between all the holder guides and said exit guide, and indexible by said controller to selectively align one of said holder guides with said exit guide.

37. (Currently presented) The apparatus according to claims 31, 34 and 36, wherein said holders and holder guides are arcuately arrayed over said indexible guide, said indexible guide being pivotable to selectively align one of the holder guides with said exit guide.

38. (Currently presented) The apparatus according to claims 31, 34 and 36, wherein said holder guides are of two different lengths, the guides of one length alternating with those of the other lengths, to minimize the space occupied by the holders and their respective paper web rolls.

39. (Currently presented) The apparatus according to claims 31, 34 and 36, wherein each of said guides includes a fixed guide element, and a pivotal guide element, each of said guide elements including pinch rolls for engaging the paper web when fed there through.

40. (Currently presented) The apparatus according to claims 31 and 34, wherein said black and white text and image print engine includes:

- a. a first conveyor system for receiving the paper web with one face facing upwardly;
- b. a first ink jet print head page wide arrays assembly overlying said first conveyer system for printing on said one side of the paper web;
- c. a second conveyer system for receiving the paper web from the first conveyer system, with the opposite face of the web facing upwardly;
- d. and a second ink jet print head page wide arrays assembly overlying said second conveyer system for printing on said opposite face of the web facing upwardly, and
- e. an ink drying and curing system downstream of said first and second conveyer assembly.

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41. (Currently presented) The apparatus according to claim 31, 34 and 40, wherein said drying system is an IR drying system.
42. (Currently presented) The apparatus according to claim 31, 34 and 40, wherein said curing system is an UV curing system.
43. (Currently presented) The apparatus according to claim 31 and 34, wherein said cutter is upstream of the text and image print engine such that said paper web is cut into sheets before the black and white text and image has been printed by said black and white text and image print engine.
44. (Currently presented) The apparatus according to claim 31 and 34, wherein said cutter is downstream of the text and image print engine such that said paper web is cut into sheets after the black and white text and image has been printed by said black and white text and image print engine.
45. (Currently presented) The apparatus according to claim 31, 34 and 44, wherein said cutter is mounted on a cylinder having a cutter blade extending longitudinally of the cylinder, so as to be transverse said paper web and the synchronization between the web speed and said cylinder defines the cut sheet size;
46. (Currently presented) The apparatus according to claims 31, wherein said cover print engine includes:
 - a. a bin for receiving a stack of covers pre-cut to size;
 - b. a covers print engine assembly for printing the cover information;
 - c. a top feeder for feeding the covers sequentially from the top of the stack in the bin to the cover print engine assembly;
 - d. said cover print engine assembly being controlled by said controller to print the front cover information of a selected book title on one cover, and the back cover information of the selected book title on the immediately succeeding cover.

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47. (Currently presented) The apparatus according to claims 31 and 46 wherein said cover print engine is a thermal transfer type print engine.

48. (Currently presented) The apparatus according to claims 31 and 46, wherein said cover print engine assembly includes a plurality of print heads for printing in color.

49. (Currently presented) The apparatus according to claims 31, 46 and 48, wherein each of said print heads prints its respective color out to the cover from a colored transfer ribbon.

50. (Currently presented) The apparatus according to claims 31, 46 and 48, wherein each of said print heads prints its respective color out to the cover from a color transfer ribbon by a thermal transfer process.

51. (Currently presented) The apparatus according to claims 31, 46 and 48, wherein said respective colors are standard process colors Cyan, Magenta, Yellow and Black.

52. (Currently presented) The apparatus according to claims 31, 46 and 48, wherein said respective colors are spot colors including metal colors.

53. (Currently presented) The apparatus according to claims 31 and 46 wherein said cover print engine includes a plurality of sheets and a sheet fed loading mechanism.

54. (Currently presented) The apparatus according to claims 31, 34 and 46 wherein said cover print engine prints covers simultaneously with said black and white printing engine printing text and images of said book title.

55. (Currently presented) The apparatus according to claim 31, wherein said collator includes:

a. a collator frame;

b. a page feeder for feeding the printed pages of text to the collator frame, and to stack the pages therein, starting with the first page, facing downwardly;

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c. and a cover feeder for feeding said front and back covers to said collator frame, starting with said front cover, and including an inverter for inverting the front cover when fed to the collator frame.

56. (Currently presented) The apparatus according to claims 31 and 55, wherein said collator further includes:

- a. fork insertable in an inclined position in said collator frame, said page feeder feeding the printed pages of text/image and stacking them onto the fork, starting with the first page facing downwardly;
- b. whereas a space is provided between the fork and the collator frame, to permit feeding of said front cover in inverted position into the lower end of the stack, and said back cover to the upper end of the stack;
- c. and a clamping plate actuated by said controller for clamping the two covers with the stack of pages there between, in preparation for their binding by the binder.

57. (Currently presented) The apparatus according to claim 31, wherein said binder includes an adhesive applicator for applying adhesive to the edge of the printed pages and the cover collated by the collator.

58. (Currently presented) The apparatus according to claims 31 and 55, wherein said collator includes a grinding wheel to grind the edge of the printed pages and the cover the edge to which said adhesive applicator applies adhesive.

59. (Currently presented) The apparatus according to claims 31 and 57, wherein said binder includes a tape applicator for applying adhesive tape to one edge of the printed pages and the covers collated by the collator.

60. (Currently presented) The apparatus according to claims 31-59, wherein said apparatus is a stand-alone apparatus.